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Item nonresponse, when some, but not all, information is collected from a cooperating unit, is an aspect of all sample surveys. The problem of missing information occurs for a number of reasons, including the respondent's lack of knowledge, or refusal to answer specific questions, the interviewer's failure to follow procedures by not asking questions that should have been asked, or failing to read answers to questions, or the edit system's deletion of inconsistent responses.

The Survey of Income and Program Participation (SIPP), a new survey program of the Bureau of the Census, collects data on the receipt of a large variety of income sources. The method of collection is such that detailed questions are asked about individual income sources, thus allowing many opportunities for nonresponse at the individual item level.

The literature on the treatment of missing data has grown over the last several years. Kalton (1983), Kalton and Kasprzyk (1982), and Sande (1982) reviewed methods for treating item nonresponse as well as their properties. Methods range from deleting cases with missing data to sophisticated modelling procedures. No matter what method of imputation is used, the data producer should, at a minimum, provide indicators on the data file when data are created through an imputation method. In the SIPP, the Census Bureau uses a hot-deck procedure for assigning imputed values; imputation classes are specified by subject-matter specialists and a nonrespondent falling into the same class as a respondent will be assigned the value of the missing data item from the respondent. A detailed description of the SIPP imputation procedures is not yet available: an overview of the system can be found in Nelson, McMillen, and Kasprzyk (1984).

Coder and Feldman (1984), and Lamas and McNeil (1984) have provided early indications of item nonresponse in the SIPP. This paper extends the work on item imputation and nonresponse in SIPP by providing more information on the extent of item imputation in SIPP. We begin by briefly describing the design of SIPP, and then discuss the way in which SIPP income and program data are collected. This information aids the reader in understanding some of the terminology used in discussing SIPP; it also serves as a reference for the organization of the discussion of imputation. Following this introduction we will discuss the amount of imputation in SIPP.

A secondary goal of this paper is to help users of SIPP public-use files to understand those files and to make their use somewhat easier. Consequently, as part of this discussion, we will focus on the way information is presented on SIPP public-use files and how that presentation differs across different SIPP public use products. In addition, we will use unweighted counts to simplify the use of these data as control counts for other analyses. The Survey of Income and Program Participation

The Survey of Income and Program Participation (SIPP)

The Survey of Income and Program Participation (SIPP) is a longitudinal survey designed to pro-

vide a more accurate and precise measurement of income, and income distributions and sources, including jobs, earnings, and program participation. SIPP is also distinguished by its ability to provide more detail as to the timing of changes in the receipt of various income sources, and the timing of life events such as changes in household composition, divorce, or separation.

household composition, divorce, or separation. SIPP fields a <u>panel</u> of approximately 14,000 interviewed households at the beginning of each calendar year. Individuals in the panel are interviewed every 4 months over a 2 2/3-year period. Each interview cycle is called a wave of interviewing. Each wave is conducted over a 4 month period by dividing the sample into four randomly selected rotation groups. Each rotation group is interviewed during a given month and asked to report on income from jobs and benefits from assistance programs for the previous 4 months. The period for which data are collected are called reference months, and data are collected separately for most items for each of the 4 reference months. Thus, the SIPP sample is divided into four rotation groups, each interviewed in a separate month of a wave. At the end of one wave, all four rotation groups have been interviewed, and 4 months have passed since the initial group was interviewed. As noted above, these interviews produce monthly data for each respondent for a period of 2 2/3-years.

The principal data collected in SIPP are generally referred to as "core data" for the SIPP; they are designed to measure the economic situation of persons in the United States. Other data collected in SIPP originate in the topical modules, and are assigned to specific interview waves. Topical module data, their content and evaluation, will be subjects of later reports. In this study, we feature the core data which build an income profile of each person aged 15 and over in a sample household. This profile is developed by determining the labor force participation status of each person in the sample and then asking specific questions about types of income received for <u>each</u> month of the reference period.

The basic SIPP questionnaire contains five sections. The core set of questions is asked at the first interview and then updated in each subsequent interview. The first section of the questionnaire collects the basic labor force participation data for the 4 reference months. Respondents are asked to supply information on whether they had a job for all 4 months, and, if not, to answer a set of questions describing their activities when not at work. Those cate-gories include: "laid off," "looking for work," "not looking for work," "temporarily absent," as well as others. Labor force activity is collected on a weekly basis for all respondents with a job during the 4 month reference period. In addition, this first section of the questionnaire collects much of the information on the receipt of income from various sources; these data are used later in the interview.

Thus, this section of the questionnaire identifies the receipt of income during the 4 month reference period from various government sources, such as food stamps, Aid to Families with Dependent Children, Supplemental Security Income, General Assistance, and Workmen's Compensation. Respondents are also asked about both Social Security and retirement income other than Social Security. Within the other retirement income section, questions are provided for a number of sources including Railroad Retirement, pensions from company or union, and civil service retirement, as well as others.

Finally, the receipt of miscellaneous sources of income such as alimony, child support, interest from savings, income for foster child care, and educational assistance is identified.

The second section of the SIPP questionnaire collects information associated with wage and salary earnings. This section includes information on industry and occupation as well as hourly earnings for up to two jobs. Data are collected for two jobs held either concurrently or sequentially during the 4 month reference period. When more than two jobs occur (about 3 percent of the cases), data are collected for the two with the greatest earnings.

The third section of the questionnaire collects data on self-employment earnings and specific information about the structure of self-employment whether it was incorporated, sole proprietorship, or partnership--and the profits and losses from the business. Again, space is provided for two self-employment responses with the selection criteria the same as for wage and salary earnings.

The fourth section of the questionnaire is identified as the general amounts or other income section. This section of the questionnaire collects monthly amounts received from the income sources identified in the first section. That is, the first section identifies the receipt of income during the 4 month reference period, while amounts of income received are collected in the fourth section of the questionnaire. This section pro-vides space for collecting up to six different income sources, although no one in Waves 1 or 2 had more than five separate sources of income. The sources of income identified in this section are those labelled 1-56 on the SIPP Income Source List $\frac{1}{}$. It should be noted that this section excludes wage and salary, self-employment, and asset income, and focuses only on those other income types.

The fifth and last section of the core questionnaire collects amounts of income earned from asset holdings. Asset sources include savings accounts, bonds, stocks, and rental property, as well as others. Information is collected for the 4 month reference period on both individual and joint recipiency. A list of these asset sources are given as Codes 100-150 in the Income Source List.

More details on both the design and content of SIPP are available in Nelson, McMillen and Kasprzyk (1984).

SIPP Item Nonresponse

In SIPP, item nonresponse is handled through an imputation system developed for the SIPP crosssectional data files. An occurrence of an imputation in SIPP implies that the respondent either provided no data or provided data that would not pass the consistency edit program.

To simplify the discussion of this issue, we have chosen to focus on three areas: 1) imputation of labor force and recipiency data; 2) imputation of wage and salary amounts; and 3) imputation of amounts received from other income sources, specifically those incomes identified in the fourth section of the questionnaire.²⁷ These three were chosen because they represent the majority of information collected in SIPP, and they represent three different problems faced by the user. Those differences will be developed in the subsequent sections.

Labor Force and Recipiency Imputation

A large portion of the data for individuals collected in SIPP is collected in this section of the questionnaire, and reported in the person record of the relational public-use file. There are 83 imputation flags provided to alert the user that some data have been imputed.

Previous discussions of item imputation by Coder and Feldman (1984) showed that, for most items in SIPP, the amount of imputation is quite small. That discussion focused on particular items in the questionnaire; in this paper, however, we try to summarize the amount of imputation for persons. Developing that summary is not straightforward. In analyzing the extent of nonresponse imputation for a particular item, the appropriate denominator is the number of persons who were asked that item. Extending that logic to a person summary suggests that we must consider the number of questions asked of a particular individual for which an imputation was performed. Keep in mind, only 83 of the several hundred items in the labor force and recipiency section are imputed. This would produce an imputation rate for each person which could then be tabulated. One difficulty with this approach is that it results in a different denominator for each person and requires a more complicated approach to understanding the results. For example, a person may have a 25 percent imputation rate based on 1 imputation for 4 items or 4 imputations for 16 items. That rate is useful for understanding the extent of imputation, but may not provide the analyst sufficient information concerning the quality of the data on the individual.

A second problem with creating a person rate is that the Census Bureau public-use files do little to help the user calculate that number. Imputation flags are coded \emptyset for no imputation and 1, to signal that there has been an imputation for that variable. There is nothing on the flag to indicate whether the respondent was eligible for imputation on that variable. That is to say, there is no code to indicate that a case is not in the universe of cases for which imputation may have been done. Thus, the user is forced to look first at the item, determine the universe for that item, and then infer the universe to the imputation field. For questions asked of all respondents, that is quite simple. But, of course, most questions are not asked of all respondents.

For these reasons, and principally the former, we summarize imputation from the labor force and recipiency section in terms of the level or number of imputations for each person. This is a straight-forward sum of the 83 imputation flags and provides a useful characterization.

Tables 1A and 1B provide the distribution of imputation level for labor force and recipiency items in the first two SIPP interviews. For these items, 85.7 percent of the persons in the first SIPP interview had no imputation at all. The remaining 14.3 percent is distributed across a range of 1-17 imputations per person. The highest number of imputations for any person is 17, and that occurred only once. Over 87 percent of the cases with some imputation have no more than three items imputed. Results are similar for Wave 2, with 85.1 percent of the persons in SIPP having no imputation at all. The highest number of imputations for any person is 11, and over 92 percent of the cases with some imputation have no more then three items imputed. Coder and Feldman (1984) showed that for any given item there is relatively little imputation; here we extend that understanding by showing that for most persons having some imputation, the number of labor force and recipiency items is small.

Wage and Salary Imputation

In discussing imputations of wage and salary information, we restrict our discussion to the imputation of amounts. This allows us to exhibit the pattern of imputation across the 4 reference months. We also distinguish here between no imputation and no recipiency--that is, in effect controlling for the universe discussed above. Before describing the extent of imputations occurring at this level, it is useful to discuss how these data are carried on the public use file.

In the SIPP relational public use file, a separate wage and salary record appears for each job of each person. There are 25,002 wage and salary records on the Wave 1 relational file. This, however, does not mean there are 25,002 persons with jobs. SIPP collects earnings data for a maximum of two jobs for each person during the 4 month reference period. In fact, only 23,085 persons are represented by the 25,002 jobs; that is, the number of persons holding two jobs during the 4month reference period was 1917. <u>J</u> Those two jobs may be either neld simultaneously or sequentially. <u>4</u>

Tallies from the relational file on a given variable will treat job 1 and job 2 as unique persons unless the user controls on the job number. In the rectangular version of the SIPP public-use file, separate fields are provided for each job making the distinction easier. There are, however, other problems that await the user of the rectangular file; for example, because the file contains an entry for every person for every variable, the user must screen for the proper universe prior to doing a tabulation.

Table 2A provides imputation patterns for Wave 1 wage and salary amounts by interview status (self/proxy) for job 1. Before discussing the contents of this table, we will illustrate the point made above concerning the problems that may occur using the rectangular public-use file. We began by excluding from our analysis file all persons under 15 because they were not eligible to be interviewed and, thus, would have no imputations. In addition, we excluded all persons with weight of zero. Those persons residing in a household with an individual who was not interviewed were excluded from the weighting process and received a weight of zero.⁵/ That resulted in a file of 40,572 adult respondents. To further refine our analysis, we excluded all persons who reported no wage and salary earnings for the 4 month reference period. That resulted in 22,687 persons for whom wage and salary information on job 1 was reported. The data in table 2A indicate both the extent

The data in table 2A indicate both the extent of recipiency of wage and salary earnings and imputation for job 1. Using a simple code--the number \emptyset represents no imputation, 1 identifies that imputation took place, and 2 indicates that the person did not have wage and salary earnings that month and, thus, was not eligible for imputation.

Further, the right most digit represents reference month 4 or the month before the interview, and the left-most digit, reference month 1 or 4 months before the interview. The first row of this table is for the imputation pattern $\emptyset \emptyset \emptyset \emptyset$, or no imputation for any month. Row 2 is for the pattern ØØØ1, imputation in month 4 only; row 3, 0002 or no imputation in the 3 months in which the respondent had wage and salary earnings. Looking again at row 1, 65.6 percent of those with no imputation were self-reported and 34.4 percent were proxy-reported. Alternatively, for those persons with wage and salary earnings each month. 66.4 percent of the self-reporting had no imputation and 60.1 percent of the proxy reports had no imputation. Another view of these data (table 2B) shows that little imputation (about 1 percent) is done when a person is in the universe to be asked the question for 3 months or less.

The issue at hand, however, is the characteristics of those persons with some imputation, not the level of imputation. The reader must realize that the low level of imputation results in relatively few cases to consider, thus limiting the detail that can be examined. In fact, the universe of persons with some imputation is only 3,521 or 15.5 percent.

Tables 3, and 4 describe the population which had some imputation in Wave 1. Each table is reported separately for self-and proxy-response. In table 3, the rows are race (non-black, black); and in table 4, sex (male, female). By and large these tables are self-explanatory showing that the population of persons requiring an imputation for one or more months is more male and nonblack.

Imputation of Other Income

Because of the number of possible labor force and recipiency items requiring imputation, we chose to present a summary measure of imputation. On the other hand, wage and salary imputation can be described sufficiently by focusing on the detailed imputation patterns controlling for recipiency by month. With the other income records in SIPP, we are presented with a third scenario. While the other income record contains four separate monthly flags to identify imputation of the amount of an income source on a monthly basis, an examination of those flags shows that they are either all 1's or all Ø's. That is to say, imputation was done for the whole reference period or not at all. This is predominantly a function of what was reported to the interviewer--people either know all the amounts or none. Furthermore, imputations are identified only for the amount of income received; the imputation of receipt of "other income" sources is not identified. Tables 5A and 5B provide a tabulation of not imputed/ imputed for a selection of the 39 other income types for Waves 1 and 2.

To develop these tables, we returned to the relational file because it provided an easier approach to tallying these data. In the relational file there is one other income (G1) record for each income source for each person. Thus, in Wave 1, there were 19,039 income sources reported by all persons.

Each record in the relational file has the same record layout; and contains a code indicating the income source reported on that record. For the rectangular file, each income source is represented by a set of four variables identifying receipt of the income source, four providing monthly amounts of income received, and four identifying whether the amount of income received was imputed for the month. To produce tables from the relational file, it was merely a matter of crosstabulating the four imputation flags with the item identifying the income source.

On the rectangular file, however, completing this cross-tabublation is more complicated. You must consider 156 imputation flags, and 39 other income sources with 4 imputation flags per source, as well as screen for the universe of persons to whom the question is applicable.

As with previous data, the overall amount of imputation for item nonresponse is low. The tables show that over the 19,039 income types reported in Wave 1, only 7.1 percent were imputed. The imputation rates ranged from a high of 26.7 percent for payments from sickness, accident, or disability insurance policies to a low of \emptyset for income assistance from charitable groups and income from roomers and boarders. Two other variables occur with Ø imputation, Women, Infants and Children Nutrition Program (WIC) and food stamps. The amounts for WIC are not collected as part of the questionnaire and, thus, are imputed for everyone. Food stamp amounts are collected in a separate section of the questionnaire. The actual imputation level for food stamps in Wave 1 is 2.9 percent. Similarly, of the 14,791 other income sources reported in Wave 2, only 7.8 percent were imputed. The imputation rates by income sources for Wave 2 varies widely as they did for Wave 1.

SUMMARY

Several points have been made in this paper. The most important is that, regardless of the topic or way of measuring it, item imputation is low in SIPP. Second, in looking at several demographic characteristics of those for whom imputation is done, there is nothing that suggests they might be an unusual group. The third point of this paper is that the user must proceed with caution regardless of which version of the publicuse file is used.

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FOOTNOTES

1/ Each source of income collected in SIPP is assigned a numeric code; for example, Social Security is assigned the income type code 1. The SIPP Income Source List is a summary form listing income sources, assets, and "special indicators" such as Medicaid, Medicare, Disabled, and their respective numeric codes. The Income Source List can be found at the back of each questionnaire.

2/ The SIPP cross-sectional microdata files are released to the public in two formats: a relational structure and a rectangular structure. The relational structure contains eight types of records at five levels: sampling unit, household, family, person, and income sources; the rectangular structure contains one logical record for each sampled person. The incomes identified in the fourth section of the questionnaire are found on the "G1" record of the relational file.

3/ As noted in Feldman's memorandum of December 31, 1984 ("Revision to the Final Wave 1 Processing System"), 61 persons had 2 job records both of which were coded as job 1, and 2 persons had 2 job records both coded as job 2. Thus, only 22,922 persons are represented by those 25,002 records, and 2,080 persons held 2 jobs. In addition, the public-use file has 4 persons who have only a job 2 record. If those would have been coded job 1, then the correct count would be 22,926 persons with jobs and 2,076 with 2 jobs.

4/ A specific recode to distinguish sequential from simultaneous jobs is not provided; however, beginning and ending dates are provided for jobs held for only part of the reference period. 5/ A person noninterview in an otherwise cooperating household received a zero weight in Wave 1; consequently, all persons in the household received a zero weight since household aggregates could not be created. In future waves of SIPP, these person noninterviews are handled by imputation and receive a positive weight.

| TABLE | 14. | SIPP Wa Recipie | ve 1 | Labor For | ce and | |
|-------------|------------------|----------------------|------------|---------------------|--------------------------|----------------------|
| | | Recipie | ncy | Summary | Percent of | |
| | nber o | | | Percent | Imputation (excluding | |
| <u>1000</u> | utatio 0 | | 757 | 85.7 | (excluding | <u>v</u> / |
| | 1 | | 814 | 9.4 | 65.7 | |
| | 2 3 | | 884 379 | 2.2 .9 | 15.2 6.5 | |
| | 4 | | 200 | .5 | 3.4 | |
| | 5 6 | | 121 79 | .3 | 2.1 1.4 | |
| | 7 | | 39 | .1 | .7 | |
| | 8 | | 49 | .1 | .8 | |
| | 9 10 | | 130 73 | .3 .2 | 2.2 1.3 | |
| | 11 | | 28 | .1 | .5 | |
| - | 12+ | 10 | 9 562 | 100.0 | $\frac{.1}{99.9}$ | |
| 10 | tal | 40 | 502 | 100.0 | 33.3 | |
| TABLE | 18. | | | Labor For | ce and | |
| | | Recipie | ncy | Summary | Percent o | f |
| Nu | mber o | of | | | Imputatio | ns |
| Imp | utatic | | son | Percent | (excluding | <u>Ø</u>) |
| | 0 1 | | 482 | 85.1 10.2 | 68.3 | |
| | 2 | | 917 | 2.8 | 19.0 | |
| | 3 4 | | 258 130 | .8 .4 | 5.3 2.7 | |
| | 5 | | 89 | .3 | 1.8 | |
| | 6 | | 48 | .2 | 1.0 | |
| | 7 8 | | 45 22 | .1 .1 | .9 .5 | |
| | 9 | | 16 | | .3 | |
| | 10 | | 5 2 | | .1 | |
| т | 11 otal | 32 | 2314 | 100.0 | 99.9 | |
| TABLE | 2B. | | | | of Wage and | Salary |
| | | Earning |]s: | Job 1 Self | Proxy | Total |
| | | e 4 Mont | hs | 11431 | Proxy 6579 | 18010 |
| | Imputa | | | 9539 728 | 5011 503 | 14550 1231 |
| | | tation cations | | 625 | 448 | 1073 |
| Thr | ee Imp | outation | | 14 | 4 | 18 1138 |
| | | utations 2 3 Mont | | 525 870 | 613 523 | 1393 |
| | Imputa | | | 895 | 490 | 1335 |
| | Imput | | | 9 16 | 5 28 | 14 44 |
| | | tations outation | าร | | | |
| In Un | ivers | e 2 Mont | | 1044 1042 | 609 608 | $ 1653 \\ 1650 $ |
| | Imputa Imput | tation | | 1042 | 0 | 1050 |
| Two | Imput | tations | | 1 | 1 | 2 |
| | iverse Imputa | ≥ 1 Mont | th | 803 803 | 536 536 | 1339 1339 |
| | Imput | | | | | |
| | | e O Mont | ths | $\frac{208}{14356}$ | $\frac{84}{8331}$ | 292 22687 |
| TOTAL | | | | 140.00 | 5551 | 22007 |
| TABLE | | | | | Salary Imp | |
| | | in une (Status a | | | by Respons e 1 | e |
| | | | | Re | sponse Stat | |
| | No | nblack | | <u>Self</u> 1650 | Proxy 1422 | <u>Tota1</u> 3072 |
| | NU | Row | % | 53.7 | 46.3 | 100.0 |
| RACE | | Column | x | 86.0 | 88.8 180 | 87.2 449 |
| | BI | ack Row | % | 269 59.9 | 40.1 | 100.0 |
| | _ | Column | % | 14.0 | 11.2 | 12.8 |
| | 101 | tal Row | % % | 1919 54.5 | 1602 45.5 | 3521 100.0 |
| | | Column | % | 100.0 | 100.0 | 100.0 |
| TADIC | | Donconc | wi+ł | han and | Salary Imn | utation |
| TABLE | | | | | Salary Imp by Respons | |
| | | Status a | | Sex: Wave | 1 | |
| | | | | Self | sponse Stat Proxy | <u>us</u> Total |
| | Ma | | | 1029 | 1129 | 2158 |
| SEX | | Row Column | % % | 47.7 53.6 | 52.3 70.5 | 100.0 61.3 |
| 257 | Fer | nale | <i>/</i> o | 53.0 890 | 473 | 1,363 |
| | | Row | % | 65.3 | 34.7 | 100.0 |
| | TO | Column TAL | % | 46.4 | 29.5 | $\frac{38.7}{3521}$ |
| | | Row | % | 54.5 | 45.5 | 100.0 |
| | | Column | ž | 100.0 | 100.0 | 100.0 |

| | | Wave | 1 Respons | e Status | |
|-------|---------------|------------|-------------|-------------|--------------|
| Imput | ation P | | Self | Proxy | TOTAL |
| 0000 | | | 9539 | 5011 | 14550 |
| | Row | % | 65.6 | 34.4 | 100.0 |
| | Column | x | 66.4 | 60.1 | 64.1 |
| 0001 | | | 26 | 10 | 36 |
| | Row | % | 72.2 | 27.8 | 100.0 |
| | Column | % | 0.2 | 0.1 | 0.2 |
| 0002 | | | 326 | 241 | 567 |
| | Row | % | 57.5 | 42.5 | 100.0 |
| | Column | % | 2.3 | 2.9 | 2.5 |
| 0010 | | ~ | 329 | 231 | 560 |
| | Row | % | 58.8 | 41.3 | 100.0 |
| | Column | % | 2.3 | 2.8 | 2.5 |
| 0020 | D + | o/ | 39 | 16 | 55 |
| | Row | % | 70.9 | 29.1 | 100.0 |
| 0000 | Column | % | 0.3 | 0.2 | 0.2 |
| 0022 | 0 | a | 410 | 266 | 676 |
| | Row | % | 60.7 | 39.3 | 100.0 |
| 01.00 | Column | × | 2.9 354 | 3.2 250 | 3.0 604 |
| 0100 | n | ar | | | |
| | Row Column | % % | 58.6 2.5 | 41.4 3.0 | 100.0 2.7 |
| 0101 | COTUNI | h | 2.5 | 219 | 522 |
| 0101 | Row | % | 58.0 | 42.0 | 100.0 |
| | Column | NO NA | 2.1 | 2.6 | 2.3 |
| 0200 | COrumn | <i>j</i> o | 52 | 20 | 72 |
| 0200 | Row | % | 72.2 | 27.8 | 100.0 |
| | Column | ĩ | 0.4 | 0.2 | 0.3 |
| 0220 | 001000 | ~ | 63 | 23 | 86 |
| | Row | % | 73.3 | 26.7 | 100.0 |
| | Column | ž | 0.4 | 0.3 | 0.4 |
| 0222 | 001000 | ~ | 306 | 194 | 500 |
| | Row | % | 61.2 | 38.8 | 100.0 |
| | Column | ž | 2.1 | 2.3 | 2.2 |
| 1001 | | | 314 | 216 | 530 |
| | Row | % | 59.2 | 40.8 | 100.0 |
| | Column | % | 2.2 | 2.6 | 2.3 |
| 1111 | | | 525 | 613 | 1138 |
| | Row | % | 46.1 | 53.9 | 100.0 |
| | Column | % | 3.7 | 7.4 | 5.0 |
| 2000 | | | 428 | 213 | 641 |
| | Row | % | 66.8 | 33.2 | 100.0 |
| | Column | % | 3.0 | 2.6 | 2.8 |
| 2002 | | | 67 | 40 | 107 |
| | Row | × | 62.6 | 37.4 | 100.0 |
| | Column | % | 0.5 | 0.5 | 0.5 |
| 2022 | | | 59 | 41 | 100 |
| | Row | % | 59.0 | 41.0 | 100.0 |
| | Column | % | 0.4 | 0.5 | 0.4 |
| 2200 | | | 475 | 271 | 746 |
| | Row | % | 63.7 | 36.3 | 100.0 |
| | Column | x | 3.3 | 3.3 | 3.3 |
| 2202 | 0 | ~ | 71 | 36 | 107 |
| | Row | % | 66.4 | 33.6 | 100.0 |
| | Column | % | 0.5 | 0.4 | 0.5 |
| 2220 | D | ~ | 367 | 265 | 632 |
| | Row | % | 58.1 | 41.9 | 100.0 |
| | Column | % | 2.6 | 3.2 | 2.8 |
| 2222 | Dave | ~ | 208 | 84 | 292 |
| | Row Column | % | 71.2 | 28.8 | 100.0 |
| | | % | 1.4 | 1.0 | 1.3 |
| | | ~ | | | |
| **Mis | | × % | 94 57.3 | 70 42.7 | 164 100.0 |

**These 21 patters were combined into the misc. categories 0011,0012,0102,1010,0111,0112, 0202, 0221,1000,1010,1011,1020,1100,1101,1201, 1221, 2010,2020.2100,2110,2121.

| The imputation pattern xxxx | |
|--|----|
| Note: represents the four referen | ce |
| 0 = no imputation months of the wave, the lef | t- |
| 1 = imputation most reference month being | 4 |
| 2 = no wage and months ago, the right-most | |
| salary earnings reference month being 1 mon | th |
| ago. | |

| ABLE 5A. Receipt of "Other Inc Pattern: Wave 1 | | | outation |
|---|----------------------|--------------------|----------------|
| | No Months | All Four Months | |
| | Imputed | Imputed | Totals |
| Social Security | 6,881 | 516 | 7,397 |
| Row % | 93.0 | 7.0 | 100.0 |
| Column % | 38.9 | 38.1 | 38.9 |
| Railroad Retirement Pay Row % | 158 90.3 | 17 9.7 | 175 100.0 |
| Column % | 0.9 | 1.3 | 0.9 |
| Federal Supplemental | 685 | 38 | 723 |
| Security Income (SSI) Row % | 94.7 | 5.3 | 100.0 |
| Column % | 3.9 | 2.8 | 3.8 |
| State Unemploy. Comp. Row % | 1,032 93.6 | 71 6.4 | 1,103 100.0 |
| Column % | 5.8 | 5.2 | 5.8 |
| Veterans Comp./Pensions | 736 | 63 | 799 |
| Row % Column % | 92.1 4.2 | 7.9 4.6 | 100.0 4.2 |
| Worker's Compensation | 249 | 31 | 280 |
| Row % | 88.9 | 11.1 | 100.0 |
| Column % Insurance Policy Payments | 1.4 | 2.3 | 1.5 |
| (Sickness, accident, disa.) | 22 | 8 | 30 |
| Row % | 73.3 | 26.7 | 100.0 |
| Column % AFDC | 0.1 679 | 0.6 20 | 0.2 699 |
| Row % | 97.1 | 2.9 | 100.0 |
| Column % | 3.8 | 1.5 | 3.7 |
| General Assistance Row % | 228 94 . 2 | 14 5.8 | 242 100.0 |
| Column % | 1.3 | 1.0 | 1.3 |
| WIC | 301 | 0 | 301 |
| Row % Column % | 100.0 1.7 | 0.0 | 100.0 1.6 |
| Food Stamps | 1,749 | 0 | 1,749 |
| Row % | 100.0 | 0.0 | 100.0 9.2 |
| Column % Child Support Payments | 9.9 713 | 0.0 30 | 743 |
| Row % | 96.0 | 4.0 | 100.0 |
| Column % | 4.0 1,531 | 2.2 183 | 3.9 1,714 |
| Union/Company Pension Row % | 89.3 | 10.7 | 100.0 |
| Column % | 8.7 | 13.5 | 9.0 |
| Fed. Civil Service Pension Row % | 364 91.5 | 34 8.5 | 398 100.0 |
| Column % | 2.1 | 2.5 | 2.1 |
| Military Retirement Pay | 242 | 37 | 279 |
| Row % Column % | 86.7 1.4 | 13.3 2.7 | 100.0 |
| State Government Pensions | 394 | 35 | 429 |
| Row % | 91.8 | 8.2 | 100.0 |
| Column ≵ Local Government Pensions | 2.2 164 | 2.6 17 | 2.3 181 |
| Row % | 90.6 | 9.4 | 100.0 |
| Column % | 0.9 | 1.3 | 1.0 |
| Other Payments for Retiremer Disability, or Survivor | 161 | 26 | 187 |
| Row % | 86.1 | 13.9 | 100.0 |
| Column % | 0.9 | 1.9 | 1.0 |
| Income from a Chari. Group Row % | 10 100.0 | 0 0.0 | 10 100.0 |
| Column % | 0.1 | 0.0 | 0.1 |
| Money from Friends Row % | 329 85.2 | 57 14.8 | 386 100.0 |
| Row % Column % | 1.9 | 4.2 | 2.0 |
| Casual Earnings | 111 | 12 | 123 |
| Row % Column % | 90.2 0.6 | 9.8 0.9 | 100.0 0.6 |
| Misc. Income ** | 945 | 146 | 1,091 |
| Row % | 86.6 | 13.4 | 100.0 |
| Column % TOTALS | 5.4 17,684 | 10.8 1,355 | 5.7 19,039 |
| Row % | 92.9 | 7.1 | 100.0 |
| Column % | 100.0 | 100.0 | 100.0 |

T

Lorumn % 100.0 100.0 100.0 **Eighteen miscellaneous sources of "Otner Income;" State Supplemental Security Income (State Administered SSI only), Supplemental Unemployment Benefits, Otner Unemployment Comp, Black Lung Payments, State temporary sickness or disability benefits, Employer or union temporary sickness policy, Indian, Cuban or Refugee Assistance, Foster Child Care Payments, Alimony, other welfare, National Guard or Reserve Forces Retirement, Income from paid-up life insurance policies or annuities, Estates and Trusts, GI Bill/VEAP Education Benefits, Lump Sum Payments, Income from Roomers or Boarders, National Guard or Reserve Pay, other cash income.

| TABLE 58. Receipt of "Other Inc Pattern: Wave 2 | ome" Sour | ces by Imp | utation |
|--|----------------|-------------|----------------|
| | No | All Four | |
| | Months | Months | |
| | Imputed | Imputed | <u>Totals</u> |
| Social Security | 5,078 | 456 | 5,534 |
| Row % | 91.8 | 8.2 | 100.0 |
| Column % Railroad Retirement Pay | 37.3 124 | 39.3 22 | 37.4 146 |
| Row % | 84.9 | 15.1 | 100.0 |
| Column % | 0.9 | 1.9 | 1.0 |
| Federal Supplemental | 559 | 77 | 606 |
| Security Income (SSI) Row % | 95 . 4 | 27 4.6 | 586 100.0 |
| Column % | 4.1 | 2.3 | 4.0 |
| State Unemploy. Comp. | 785 | 57 | 842 |
| Row % | 93.2 | 6.8 | 100.0 |
| Column % Veterans Compen./Pension | 5.8 555 | 4.9 59 | 5.7 614 |
| Row % | 90.4 | 9.6 | 100.0 |
| Column % | 4.1 | 5.1 | 4.2 |
| Worker's Compensation | 148 | 21 | 169 |
| Row % Column % | 87.6 1.1 | 12.4 1.8 | 100.0 1.1 |
| Insurance Policy Payments | 1 | 1.0 | 1.1 |
| (Sickness, accident, disa.) | 30 | 3 | 33 |
| Row % Column % | 90.9 | 9.1 | 100.0 |
| AFDC COTUMN 76 | 0.2 551 | 0.3 17 | 0.2 568 |
| Row % | 97.0 | 3.0 | 100.0 |
| Column % | 4.0 | 1.5 | 3.8 |
| General Assistance | 181 | 16 | 197 |
| Row % Column % | 91.9 1.3 | 8.1 1.4 | 100.0 1.3 |
| WIC | 280 | 0 | 280 |
| Row % | 100.0 | 0.0 | 100.0 |
| Column % | 2.1 | 0.0 | 1.9 |
| Food Stamps Row % | 1,338 100.0 | 0 0.0 | 1,338 100.0 |
| Column % | 9.8 | 0.0 | 9.0 |
| Child Support Payments | 526 | 18 | 544 |
| Row % | 96.7 | 3.3 | 100.0 |
| Column % Union/Company Pension | 3.9 1,160 | 1.6 161 | 3.7 1,321 |
| Row % | 87.8 | 12.2 | 100.0 |
| Column % | 8.5 | 13.9 | 8.9 |
| Fed. Civil Service Pensions | 272 | 35 | 307 |
| Row % Column % | 88.6 2.0 | 11.4 3.0 | 100.0 2.1 |
| Military Retirement Pay | 186 | 28 | 214 |
| Row % | 86.9 | 13.1 | 100.0 |
| Column % | 1.4 | 2.4 | 1.4 |
| State Government Pensions Row % | 296 91.4 | 28 8.6 | 324 100.0 |
| Column % | 2.2 | 2.4 | 2.2 |
| Local Government Pensions | 131 | 13 | 144 |
| Row % | 91.0 | 9.0 | 100.0 |
| Column % Other Payments for Retiremen | 1.0 t. | 1.1 | 1.0 |
| Disability, or Survivor | 144 | 19 | 163 |
| Row % | 88.3 | 11.7 | 100.0 |
| Column % | 1.1 | 1.6 | 1.1 |
| Income from a Chari. Group Row % | 5 71.4 | 2 28.6 | 7 100.0 |
| Column % | 0.0 | 0.2 | 0.0 |
| Money from Friends | 290 | 37 | 327 |
| Row % | 88.7 | 11.3 | 100.0 |
| Column % Casual Earnings | 2.1 170 | 3.2 12 | 2.2 182 |
| Row % | 93.4 | 6.6 | 100.0 |
| Column % | 1.2 | 1.0 | 1.2 |
| Misc. Income ** Row % | 822 | 129 13.6 | 951 100 0 |
| Row % Column % | 86.4 6.0 | 13.6 | 100.0 6.4 |
| TOTALS | 13,631 | 1,160 | 14,791 |
| Row % | 92.2 | 7.8 | 100.0 |
| Column % | 100.0 | 100.0 | 100.0 |

**Eighteen miscellaneous sources of "Other Income;" State Supplemental Security Income (State Administered SSI only), Supplemental Unemployment Benefits, Other Unemployment Comp., Black Lung Payments, State temporary sickness or disability benefits, Employer or union temporary sickness policy, Indian, Cuban or Refugee Assistance, Foster Child Care Payments, Alimony, other welfare, National Guard or Reserve Forces Retirement, Income from paid-up life insurance policies or annuities, Estates and Trusts, GI Bill/VEAP Education Benefits, Lump Sum Payments, Income from Roomers or Boarders, National Guard or Reserve Pay, other cash income.